

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for the synthesis of hydrogen cyanide, comprising:

reacting membrane or methane-containing natural gas, ammonia and oxygen-enriched air or oxygen in the presence of a catalyst comprising platinum or a platinum alloy; wherein oxygen and nitrogen are present in a molar ratio which satisfies the following relationship:

$$\frac{[\text{O}_2]}{[\text{O}_2 + \text{N}_2]} = 0.25 \text{ to } 1.0;$$

wherein methane and ammonia are present in a molar ratio of

$$\frac{[\text{CH}_4]}{[\text{NH}_3]} = \frac{\cancel{0.95 \text{ to } 1.05}}{\underline{0.98 \text{ to } 1.02}};$$

and wherein a molar ratio of ammonia to the sum of oxygen and nitrogen satisfies the following relationship:

$$Y = m \cdot X - a,$$

wherein

$$Y = \frac{[\text{NH}_3]}{[\text{O}_2 + \text{N}_2]}$$

$$X = \frac{[\text{O}_2]}{[\text{O}_2 + \text{N}_2]}$$

$m = 1.25 \text{ to } 1.40$; and

$a = 0.05 \text{ to } 0.14$.

Claim 2 (Original): The process according to Claim 1, wherein said molar ratio of oxygen and nitrogen is

$$\frac{[\text{O}_2]}{[\text{O}_2 + \text{N}_2]} = 0.25 \text{ to } 0.40.$$

Claim 3 (Cancelled).

Claim 4 (Original): The process according to Claim 1, wherein $m = 1.25$ to 1.33 and $a = 0.07$ to 0.11 .

Claim 5 (Original): The process according to Claim 1, wherein the starting-gas mixture is preheated to at most 150°C .

Claim 6 (Original): The process according to Claim 1, wherein a volume flow for ammonia and methane or the methane-containing natural gas is calculated and controlled as a function of a molar ratio $X = \text{O}_2/(\text{N}_2 + \text{O}_2)$ using a process control system.

Claim 7 (Canceled).

Claim 8 (Original): The process according to Claim 1, wherein said process is performed in a conventional Andrussov-reactor.

Claims 9-14 (Canceled).

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Claim 15 (Previously Presented): The process according to Claim 1, wherein said methane-containing mixture gas contains at least 88 vol.% of methane.: